

SBARA's Groundplane

AUGUST 2007 VOLUME 8 ISSUE 8

The monthly Newsletter of the South Bay Amateur Radio Association

President's Shack By Steve KA6S — Will return next month. Mean- while....

Three Hundred Million Meters Per Second

Or, more precisely, 299,792,458 meters per second, this is the exact definition of lightspeed. In other words: it is fast as crazy. It is so fast, that we don't expect a shadow to lag behind the object throwing it. And it is so fast that you expect a response to a radio call without any delay.

Now, last weekend Brad (KB8UYR), Al (WT6K) and myself (AE6YN) went to stretch this. Literally, because you need to get some distance between the transmitter and the receiver if you want to actually hear a delay. We selected a distance of roughly 768,000,000 meters (that's fourhundredeighty thousand miles!) – actually nothing you can do on Mother Earth.

Or, can you?

Yes, it is possible. 768,000,000 meters or 480,000 miles is the average distance to the moon and back. In other words: it takes a transmission roughly 768,000,000 m / 299,792,458 m/sec = 2.5 seconds to return to earth, if you bounce it off the Moon surface.

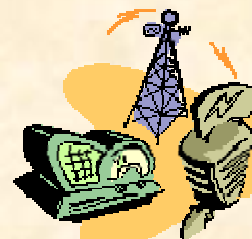
Well, that's what we went for on the early morning of July 15th. Al picked me up at the ungodly time of 4:45 in the morning, we picked up Brad shortly after, and headed then to the Jamesburg Comsat dish in Carmel Valley. That's what you need if you want to do Earth-Moon-Earth radio contacts: a reeeeeeally large antenna. And boy, large it is! It is a 29.7 meter (96.4 ft) dish and higher than a ten story building. This antenna had been used in the past for the moon landing missions and then later for the Intelsats sitting in the sky over the Pacific to link with Asian earth stations.

We arrived at about 7:00 a.m., just half an hour before Moon rise. The onsite crew gave us a quick tour, and then we started to climb stairs. There are 21 easy steps to the lower ring, but you have to manage another 73 (yes, 73, that must be ham radio!) before you are in the guts of this monster. The Jamesburg hams had a 144 MHz and a 3.400 / 3.456 GHz antenna set up. We had some difficulties with the 3.400 GHz setup, it seemed to be at the limit of the waveguides used for it, but with 3.456 GHz we could transmit and receive really clear signals. It is phantastic to hear the own telegraphy signs come back to you, or your voice in USB, and we even tried FM with success: somewhat scratchy, but intelligible! Al and I could not resist having chats in both CW and USB via the moon... (Cont'd. On Page 2).



August Meeting Raffle

The raffle for August will be announced during the monthly meeting.



Amateur Radio...

Communications to the
World

Join your fellow SBARA Hams for dinner at 6 PM Friday evening. We'll meet at Chili Garden on Walnut Avenue. This is a great way to learn about some really cool products and overall good discussions!!



SBARA's Groundplane

The monthly Newsletter of the South Bay Amateur Radio Association

Apartment DX — by Kristen McIntyre

I woke up at 6:30 this morning, as I do most mornings. I usually take my prescription sleep drugs at that point and then scan the HF bands before reading a book until the drugs take effect.

For a couple of months I've been hearing this guy on at about 6:30am on the CW part of the 40 meter band. I've noticed that fall and winter mornings are good times for 40m DX. This station was in Indonesia near Jakarta and this would be a new country for me, so I really wanted to work him. His signal was loud enough so I thought that I could reach him with my amplifier from the apartment.

The problem was that he was typically only on for 5 or 10 minutes at a clip and he tended to chat with people for much of the time only working 5 or 6 stations, so he was hard to catch. Also, Indonesia is kind of a rare country when the band CONDX are so poor so he would always attract a bit of a pileup, making it harder for me to compete with my little antenna, a 20' long helically wound vertical dipole that is not up very high and surrounded by trees and buildings. I had tried to call him quite a few times over the last couple of months without success.

Well, this morning I heard him kind of loud and without many people calling him. I was pretty groggy and I almost just went back to bed, but in a burst of motivation, I flipped on the amplifier, watched the tubes

glow a warm, bright orange, checked the plate voltage, and tuned the signal's frequency just right. I checked the antenna and amp tuning and put my call-sign out there.

I called K6WX, K6WX. Silence ... again K6WX, K6WX. I heard QRZ?, maybe he heard me, but I wasn't sure. Again I put my call-sign out there. I hear K6, K6 QRZ?. Maybe, just maybe ... I call him again and then the most beautiful sound, K6WX DE YB1A - GM UR 559 559 - NAME HALIM HALIM K6WX DE YB1A.

My heart starts pounding and I can barely contain my excitement. I reply, R R TNX UR 599 599 BK, giving him a signal report and turning it back to him. He says TNX FUR 599 73 K6WX DE YB1A. I say TNX 73 73 DE K6WX.

Well, I almost couldn't sleep after that. I let out a loud whoop in my empty apartment thinking that persistence once again pays off when hunting the DX. To me this experience epitomizes the magic of ham radio.

I touched the life of a guy in Jakarta this morning with no infrastructure and using my brain to decode digital signals. And from my apartment too! Totally cool.

Three Hundred Million Meters Per Second

(cont'd. from page 1) By the way, you can learn plenty of physics when you do such a thing. We did not only prove that the speed of light is not infinitely fast, we also experienced an amazing effect: Doppler. You know that effect from a police car with sirens coming towards you and then passing you. First the sound is

much higher in pitch, and once it passes you the pitch goes down. We had a Doppler of some 12 kHz at Moon rise, which slowly went down to zero when the Moon was in the sky center over us, and then grew again to the other side of the used frequency. How come? The Moon has a relative speed towards us while it rises, and a relative speed away from us as soon as it starts to descend. That shifts the receive frequency... (cont'd on Page 4).

Citywide CERT Drill on July 28th — Bernhard Hailer

Through some SBARA members who are with CERT, I joined the Community Emergency Response Team of Fremont a while ago and became responsible for Irvington district radio communication. My task usually is to go to Fremont Firestation No. 3 and set up a radio station in case of an emergency (or a drill). Each time we have a drill I learn a lot; we could improve already the station setup by preassembling as much as possible to save time when we have to set up the station, and we have added some important accessories to the radio station, e.g. some tools, an extension cord and a power strip.

On July 28 we had a citywide drill. This time I was not at Firestation 3, I was actually sent to the Teen Center at Lake Elizabeth. Together with my 'co-pilot' Brian (K16DSS) I set up an antenna and a radio station there to support the staff on site (Annette and Kristofer Berry, Mary Biggs and several volunteers) with administrative messaging service: the CERT leadership team prepared some scenarios where a CERT field team had to search and rescue injured people.

Our station was in contact with a net control station at

„CERT Central“, located at the city hall. The net control coordinated the scenario locations and sent out field teams to several locations to practice on some scenarios such as a hazardous material accident, a bus crash, an earthquake which had shaken the Teen Center, or a fire problem. One of the scenarios was at the Teen Center. We had to tell net control about our status, for example when we were ready for the next team.

CERT is always in need for radio amateurs. They are required in the field teams or to help out in communication nodes like firestations. Join us at CERT, it is – despite the serious background – a lot of fun, and you can learn a lot about self preparedness.

Some of the photos from the Drill are contained within this Newsletter!

Fremont CERT is very active and information can be obtained on our website at — <http://www.ci.fremont.ca.us/Fire/Education/CERTTraining.htm>

Bay Area Educational Amateur Radio Society — by Ross Peterson

Bay Area Educational Amateur Radio Society:

Next Ham Radio Study & Exam Session is Sunday, October 14, 2007, 8 AM to 5 PM, Washington Hospital West, Fremont, CA, Fee \$ 30, to register go to www.baears.com or call Ross Peterson at 1-650-349-5349, wb6zbu@arrl.net

PDF Flyer for Oct. 14 Session attached. Feel free to distribute - even on August 7th, 2007, National Night Out! CERT Leadership - forward to your CERT District members if possible.

Last Ham Radio Study & Exam Session was on July 21, 2007 at Washington Hospital West, Fremont: 73 people attended, 72 people passed the test in the end (post resolution of General Exam issues). Many of these folks were our local CERTs who upgraded from Technician to General. Congratulations fellow CERT Hams! So who's game for their Extra Class upgrade on Oct. 14th ?

August Treasurers Report — Bernhard Hailer

Dear SBARA Member,

I have recovered all SBARA treasure data since my computer failure. It was a lot of work, but I'm sure I have everything recovered. Fortunately I had kept all handwritten notices I had used to keep track since my backup.

This and three more events kept me really busy the last weekends.

Two weekends ago Brad (KB8UYR), Al (WT6k) and I went to Carmel Valley and used a huge dish to try out EME. There is an extra article in this issue which describes the details.

Last weekend I attended the citywide CERT drill and acted as staff communication officer at one of the training sites. There is also an article in this issue

telling you more.

This weekend I went chasing a balloon, with mixed results. A Stanford research balloon was launched; it contained several measurement instruments, cameras, tone beacons and an APRS unit. We could only find the APRS unit which sent out its precise location – the other payload had been separated presumably at about 11,000 ft and could not be retrieved to this date.

Why am I telling you this in an article about the SBARA treasure? I have to admit that I was neglecting a bit the financial issues of the club due to the events described above. Some of you were waiting for ARRL membership renewal through me – sorry, happened only today. Last meeting I mentioned that there is a name badge backlog – there still is. I'm working on it.



Three Hundred Million Meters Per Second

(cont'd. from page 2) For me personally it was a great adventure. I broke three records at the same time: using the highest frequency

ever so far, 3.456 GHz, (well, count away cell phone, satellite TV and other cheating instruments, and also THz devices such as flashlights, hi) using the largest antenna (have you ever used a 29.7m dish? :-)) bridging the farthest distance with a radio transmission: my chat with Al, though sitting next to me, went a little detour of 480,000 miles!

If you ever get the chance: do it, it's interesting, it's fun and you learn a lot. I will definitely go there again.

73!

Bernhard, AE6YN

ae6yn@arrl.net

Links:

www.jamesburgdish.org: information about the antenna we used

www.50mhzandup.org the Fifty Megahertz And Up club

Image (by Jim Moss, N9JIM, thanks for permission to publish in this article!):

Jamesburg dish. Look at the cars to get an idea how huge it is!

Happenings — Adam Feriantie

<u>Event Date</u>	<u>Event Name / Description</u>	<u>Website</u>
August 10	SBARA Meeting	www.sbara.org
August 11	Foothill Flea Market	www.electronicfleamarket.com
August 12	Tour De Max	www.tourdemax.org
August 18	Transmitter Hunt - Foxes Choice	www.thunt.org
August 18 & 19	Zucchini Festival—Hayward	
September 1	Transmitter Hunt - Fremont	www.thunt.org
September 2	Livermore Swap Meet	www.livermoreark.org/swap/swap.html
September 8	Foothill Flea Market	www.electronicfleamarket.com
September 10	Sunnyvale VEC Ham Radio Exam Session - Fremont	
September 14	SBARA Meeting	www.sbara.org
September 14-16	Harvest Hamvention - Fresno	www.sjvars.com
September 15	Transmitter Hunt - Foxes Choice	www.thunt.org
October 14	Ham Radio Study & Exam Session—Washington West	www.baears.com
October 19-20	Pacificon 2007—San Ramon	www.pacificon.org

SBARA CW Practice Group — Bernhard Hailer

Dear CW Enthusiast (or prospective enthusiast),

We are still on air practicing CW whenever we can. Isaac, KI6DIL, Amanda, AF6YL, Al, WT6K and I would be happy to meet you, too! The CW practice group is active every

Tuesday, 8 p.m.

Sunday, 4 p.m.

on

21.400 Mhz +/- 5 kHz

We will slow down for you, don't be scared away if somebody is really fast there! Just send a „bk“ and your callsign, we will adjust to your skills. We will also be able to listen to and to send SSB, usually we do some short chat in SSB at the end of our practice rounds.

Looking forward to meet you on **15m!**

Bernhard, AE6YN

ae6yn (at) arrl (dot) net

Three Hundred Million Meters Per Second — Bernhard Hailer



Al inspecting a 3456
-> 440 Mhz
transverter, I'm
heating up the
moon with some
CW.

Picture by Brad,
KB8UYR.

The dish team:
Bernhard
(AE6YN), Al
(WT6K) and Brad
(KB8UYR).

Picture was taken
by Brad using a
delay trigger.



Fremont CERT Drill July 28 — By Mary Biggs

Some of the faces that we all know manning communications at CERT Central during the recent CERT Drill in Fremont. Mary's older son James who just received his license is sitting with Bernhard. This was the first time James used an Amateur Radio. Eric, Mary's younger son Eric has that really cool injury to his left am.



**South Bay Amateur Radio
Association**
Founded 1974
Mailing Address
Box 8377
Fremont, Ca. 94537-8377
Web Site — www.sbara.org

President

Steve Wilson, KA6S

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DL4MHK

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Al Rendon, WT6K

Refreshments

Amanda & Isaac Feriante
AF6YL and KI6DIL

Board Members at Large

Lloyd Hartshome, N6DOK
Sam Severs, WS6S

Fremont Repeaters & Net Information

WA6PWW - 147.015 +600Khz, PL 103.5

WA6PWW - 223.900 -500Khz, PL 107.2

WA6PWW - 442.600 +5Mhz, PL 107.2

N6OXR - 146.940 -600Khz, PL 123.0

N6OXR - 441.525 +5Mhz, PL 123.0

ARES - Tuesday @ 7:30pm - 147.015 + PL 103.5

CW - Tuesday & Thursday on 75 meters—3.880
& on 10 Meters at 28.400 MHz, @ 8:30 p.m.

The [South Bay Amateur Radio Association](http://www.sbara.org) is a general interest amateur radio club serving the Fremont Tri-City area. The club has been in existence since 1974, and has functioned continuously ever since. We are an ARRL Special Service Club, an California not-for-profit tax exempt organization as specified in IRS Statutes. We sponsor training for

new hams, license examination sessions, and participate in various public service events. If you have a specialized amateur radio interest, chances are you can share it with one or more of our club members.

SBARA meets on the 2nd Friday of every month at the Veterans Hall in Niles (Fremont), California. The meeting begins at 7:30

PM. After conducting business, coffee and snacks are served while we socialize. Following the break, a program of interest will be presented. All persons interested in amateur radio are invited to attend. Families are welcome. We hope to see you there!

For those who would like to upgrade their licenses, here's an alternative testing opportunity. The Silicon Valley VE Group has scheduled regular test sessions every alternate Saturday morning at the HP facility in Cupertino. The ARRL site shows the following info for this Saturday, information:

*Sponsor: * SILICON VALLEY VE GROUP

*Time: * 8:00 AM (Walk-ins allowed)
*Contact: * MORRIS E JONES
(408)507-4698
*Email: *
AD6ZH@ARRL.NET
<mailto:AD6ZH@ARRL.NET>
*VEC: * ARRL/VEC
<http://wireless.fcc.gov/services/amateur/licensing/vecs.html>
*Location: * HEWLETT PACKARD
19333 VALLCO PKWY
BLDG #2
TESTS START BETWEEN
8-10:30AM

MAP N37 19.490
W122 00.568
CUPERTINO, CA 95014

In addition, these sessions are planned every two weeks through at least the end of May (March 17, April 7, April 21...).



Club Classifieds

**List your items
for sale or trade
here.**

Let other club members know about the gear you wish to sell, trade, need, etc. Send your info to BB.Arrl@WB9YVM before the 15th of each month to get it in the next month's newsletter. Limit your classified to 25 words or less. Ham Radio, Computer, or electronic related items only please. Listings are posted for 1 month, resubmit for additional months. Listings are first-come-first-serve, limited to space available. We reserve the right to edit content.

AMATEUR RADIO LICENSE TESTING

This session is produced by Bay Area Educational Amateur Radio Society

Study Session, Followed by Exam

Offering a one day study session for Technician or General theory, followed by testing. Extra class tests will be given upon request (no Extra study session available).

WHEN: Sunday, October 14, 2007
8:00am - 5pm

WHERE: Washington Hospital West, Fremont

FEE: \$30.00

Register: www.baears.com

Questions: Ross Peterson 650-349-5349 or wb6zbu@arrrl.net
Class size is limited, reservations are required.

Prospective Hams should have an active Ham as a sponsor to assist in familiarization with amateur operation.

RESERVE YOUR SPACE * BE A HAM !

Sponsored by:

Fremont Ares (<http://www.fremontares.com>)

Fremont Fire Department (<http://www.ci.fremont.ca.us/Fire/default.htm>)



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(Near Disneyland)
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- 100 mems • Built-in TNC 1200 & 9600 Baud
- Front Panel GPS in • Rear DB-9 port
- CTCSS/DCS Encode/Decode built in

Low Pricing!



In honor of the 400th anniversary of the Popham Colony in Maine and the beginnings of shipbuilding in New England, the Merrymeeting Amateur Radio Association ([MARA](http://www.mara.org)) is organizing a Special Event Station. Call sign N1P will be operating on various bands and modes August 17-19, 2007.

Announcements

SBARA's monthly meeting is August 10th.

Veterans Hall in Niles

The Hayward Zucchini Festival is August 18th and 19th. For every shift you work your name will be put into a drawing for a Yaesu FT-2800M, 65 watt 2 meter mobile. Also, every shift you work earns SBARA money to help continue with all our programs.

If you haven't participated in the past give it a try this year. The festival is close by in Hayward and takes only a few hours of your

time. The benefit is enormous for SBARA. Go to www.sbara.org and click on the flashing 'Hayward Zucchini Festival' in the menu bar for map to Kennedy Park.

For signing up or if you have any questions, contact Al Rendon at (510) 656-2427 or by e-mail at wt6k@arrl.net.

Please consider helping and give Al a call soon!!

The Ground Plane — KU6S

<http://www.sbara.org>

South Bay Amateur Radio Association — SBARA

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